

Amendments to the Specification

Please replace paragraph [0005] with the following amended paragraph:

[0005] According to one aspect of the invention, there is provided a bypass valve ~~for a heat exchanger including a plurality of parallel, tubular members having adjacent wall portions defining flow openings in communication to form flow manifolds.~~ The bypass valve comprises comprising a housing having a hollow plug portion with opposed plug walls defining inlet and outlet openings in the plug walls therein, ~~the plug walls being adapted to be sealingly mounted between selected adjacent tubular member wall portions to allow fluid flow respectively between the flow manifolds and the inlet and outlet openings.~~ The bypass valve housing also has an actuator portion located adjacent to the plug portion, the actuator portion having no inlet and outlet openings for flow through the actuator portion. Also, an actuator is releasably mounted in the actuator portion and has a reciprocating plunger extending into the plug portion to block and unblock flow between the bypass valve inlet and outlet openings.

Please replace paragraph [0006] with the following amended paragraph:

[0006] According to another aspect of the invention, there is provided a heat exchanger comprising a plurality of ~~parallel, tubular members having adjacent~~ spaced-apart wall portions defining flow openings ~~in communication to form inlet and outlet manifolds in the wall portions~~ for the flow of fluid through the tubular members. A bypass valve includes a housing having a hollow plug portion with opposed plug walls defining inlet and outlet openings ~~therein, in the plug walls.~~ [[t]]The plug walls being are sealingly mounted between selected ones of said spaced-apart ~~adjacent tubular member~~ wall portions to allow fluid flow ~~respectively between the flow manifolds and the bypass valve inlet and outlet openings and respective flow openings in the selected ones of said spaced-apart wall portions.~~ The bypass valve housing also has an actuator portion located adjacent to the plug portion, the actuator portion having no inlet and outlet openings for flow through the actuator portion. Also, an actuator is releasably mounted in the actuator portion and has a reciprocating plunger extending into the plug portion to block and unblock flow between the bypass valve inlet and outlet openings.

Please replace paragraph [0024] with the following amended paragraph:

[0024] Temperature responsive actuator 50 is sometimes referred to as a thermal motor and it is a piston and cylinder type device. Barrel or plunger 64 is filled with a thermal sensitive material, such as wax, that expands and contracts, causing the actuator to extend ~~actually~~ axially upon being heated to a predetermined temperature and to retract upon being cooled below this predetermined temperature. Where bypass valve 12 is used in conjunction with an automotive transmission fluid or oil cooler, this predetermined temperature is about 80° C., which is the temperature of the fluid from the transmission when bypass flow is no longer required.

Please replace paragraph [0026] with the following amended paragraph:

[0026] Referring next to Figures 6 and 7, another preferred embodiment of a bypass valve according to the present invention is generally indicated by reference numeral 80. In bypass valve 80, the temperature ~~responsible~~ responsive actuator 50 includes a solenoid having a solenoid coil 82 and a central actuator shaft 84 attached to a plunger 86. Plunger 86 also has a notch or bleed hole 76 to provide pressure spike relief when valve 80 is closed. Actuator shaft 84 extends upon energization of solenoid coil 82, so that plunger 86 blocks flow between the housing inlet and outlet openings 44, 46. A spring 88 located in housing plug portion 26 bears against plunger 86 to act as bias means for urging the actuator shaft 84 to retract upon the ~~energization~~ de- energization of solenoid coil 82.